The Geological Survey and Resource Assessment Division

Department of Natural Resources

Drought Assessment Committee (DAC)

July 13, 2005

Department of Natural Resources

Missouri Drought Plan 2002

The purpose of the plan is to coordinate the response of 14 state and federal agencies with local governments, private industry, and concerned public to mitigate drought impacts.

Drought Assessment Members

Missouri Department of Natural Resources

Missouri Department of Agriculture

Missouri Department of Public Safety

Missouri Department of Health and Senior Services

Missouri Department of Conservation

Missouri Department of Economic Development

Missouri Department of Social Services

University of Missouri-Columbia

U.S. Department of Commerce

U.S. Department of Agriculture

U.S. Army

U.S. Department of the Interior

U.S. Environmental Protection Agency

Federal Emergency Management Agency

Local Groups and Entities

Regional Planning Commissions

Response Plan Operations

Phases of Drought Response System

Phase 1 - Advisory Phase

An advisory phase is normally determined by the Climate and Weather Committee as dry conditions warrant. The committee examines precipitation, stream flow, pond and groundwater levels, Palmer drought and soil moisture indices and any other agricultural and water supply information available.

Phase 2 - Drought Alert

When the Palmer Drought Index reads -1.0 to -2.0, and stream flow, groundwater, and reservoir levels are below normal for a several month period and/or when the CWC determines Phase 2 activities are warranted the Governor will be requested by the Director of Natural Resources and other agencies such as Agriculture to make a drought alert declaration for those counties.

Climate and Weather Committee

The CWC is an official standing committee that meets at anytime members see the need. The drought assessment evaluation of 1999-2000 determined that the CWC needed to remain on call to more quickly respond to the onset of drought.

Drought Assessment Committee DAC

If Phase 2 is declared by the Governor then the director of the Department of Natural Resources will activate the DAC.

State, federal, and city, county, regional commissions, and other agencies designated by the DAC constitute the membership.

Drought Assessment Committee

Communication, Coordination, Collaboration

Communicate severity, impacts upon resources

Coordinate agency capability, public information
Collaboration drought status map, impact teams, federal and state assistance

Phase 3 - Conservation Phase

Phase 3 is activated;

when the Palmer Drought indices is between -2 and -4; or

when the DAC determines that impacts require a Phase 3 response

when hydrologic conditions warrant and forecast indicate an extended period of below normal precipitation.

Impact Teams

The teams assess drought impacts and recommend drought mitigation measures to the DAC.
The impact teams are composed of technical experts within the agencies

- Agriculture
- Environmental
- Recreation
- Water Supply
- Health
- Communications
- Economic

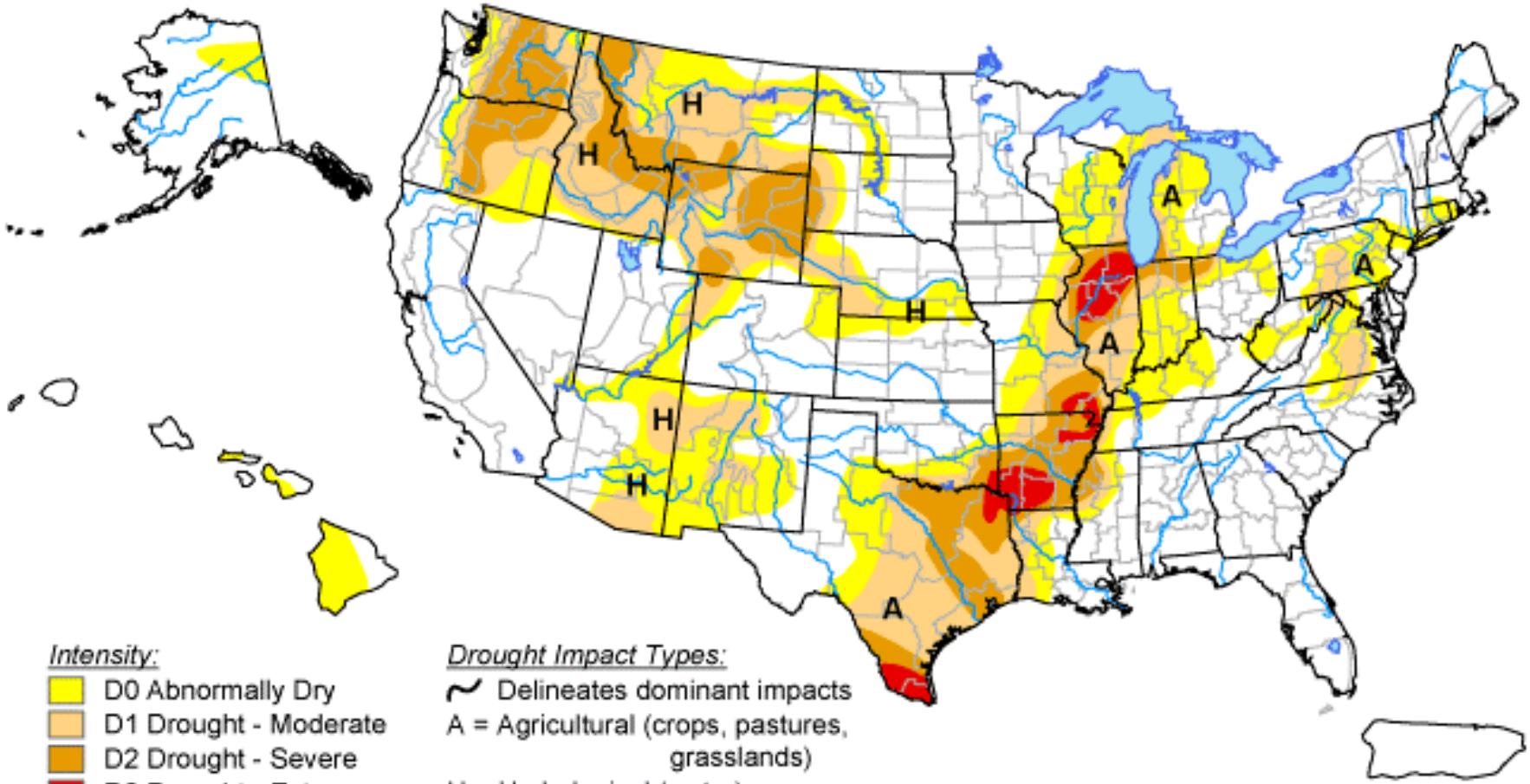
Phase 4 - Drought Emergency

when the Palmer Drought Severity Index is more severe than a negative (-4) or

when the DAC determines that Phase 4 activities are required

U.S. Drought Monitor

July 5, 2005
Valid 8 a.m. EDT



Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:
- ~ Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)
- (No type = Both impacts)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

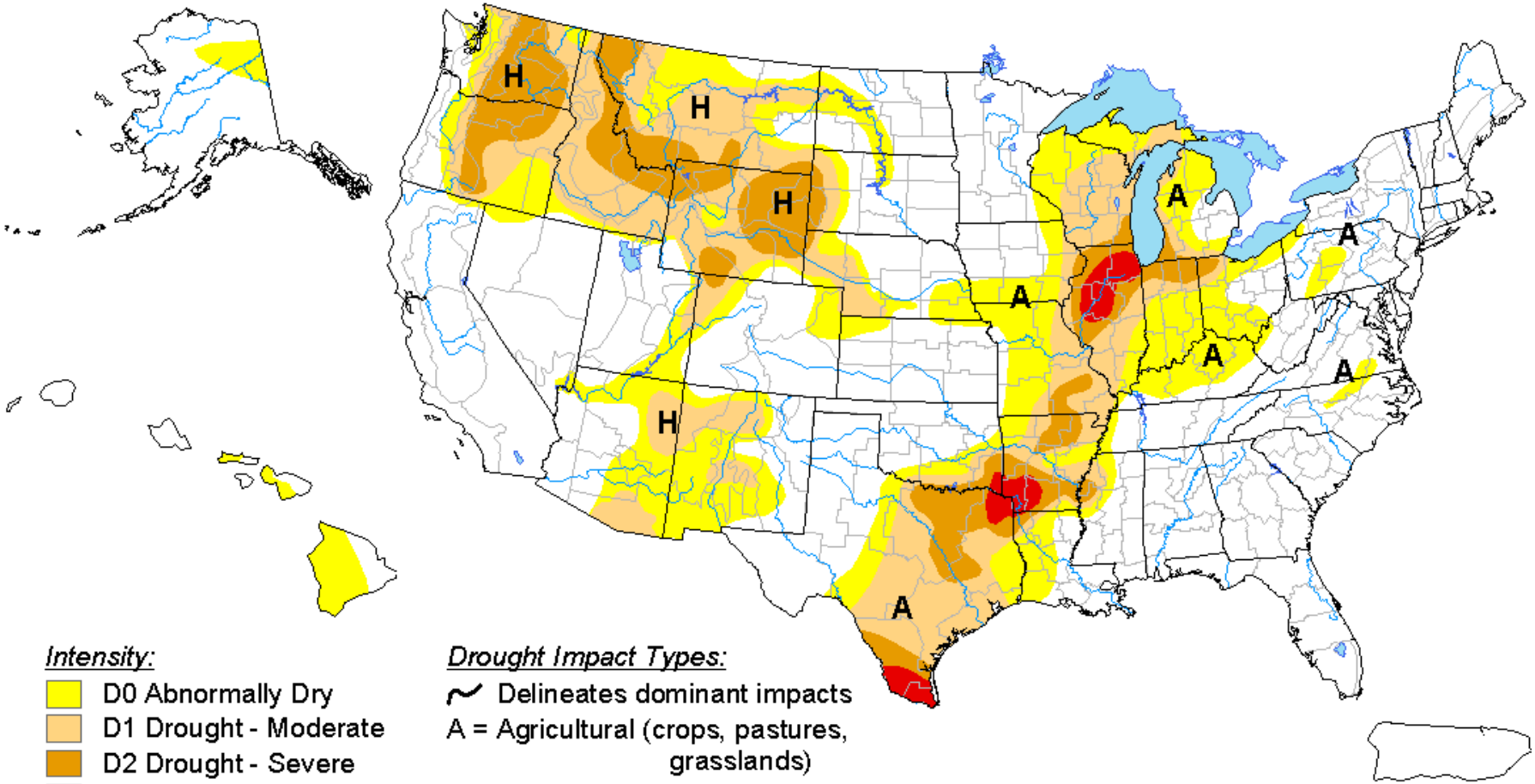
USDA National Drought Mitigation Center

Released Thursday, July 7, 2005

Author: Richard Tinker, NOAA/NWS/NCEP/CPC

U.S. Drought Monitor

July 12, 2005
Valid 8 a.m. EDT



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The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

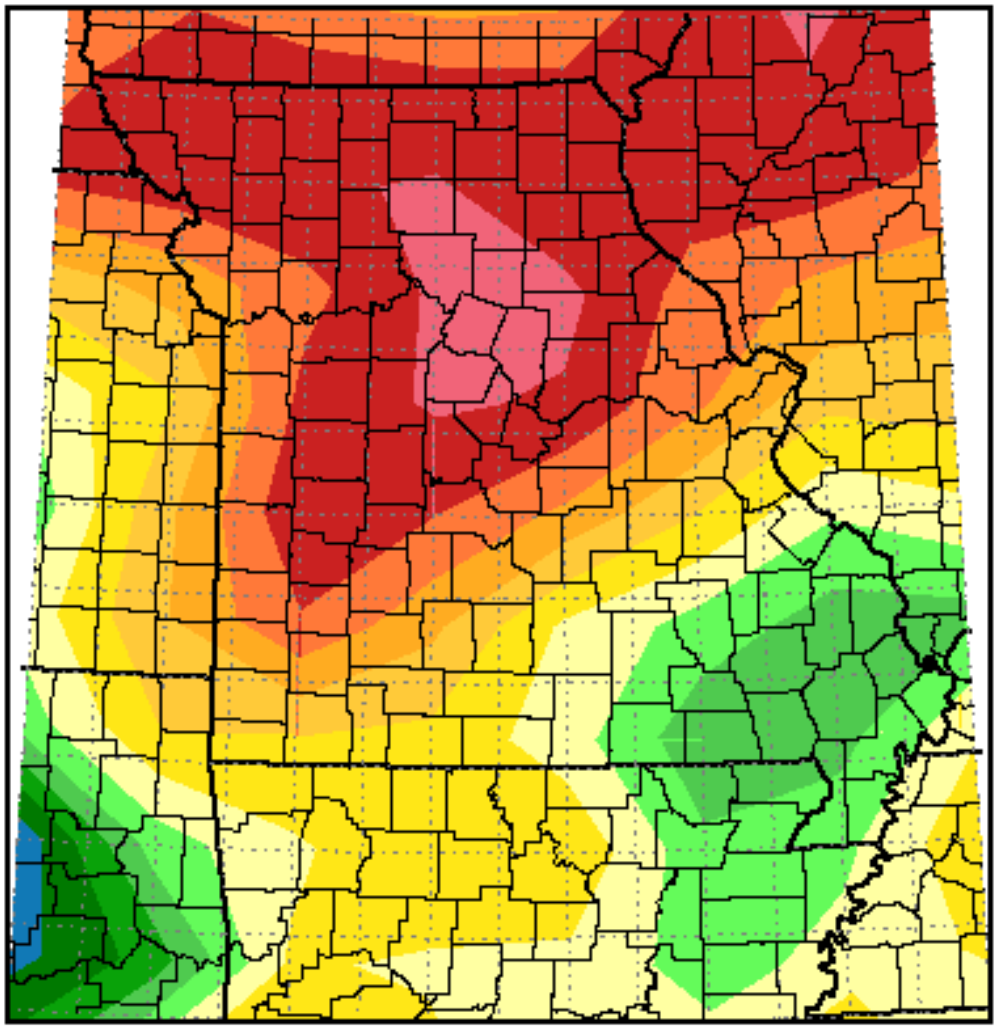
http://drought.unl.edu/dm

USDA National Drought Mitigation Center

Released Thursday, July 14, 2005

Author: Richard Tinker, NOAA/NWS/NCEP/CPC

Total Precipitation Departure from Mean in Inches
June 15, 2005 to July 12, 2005



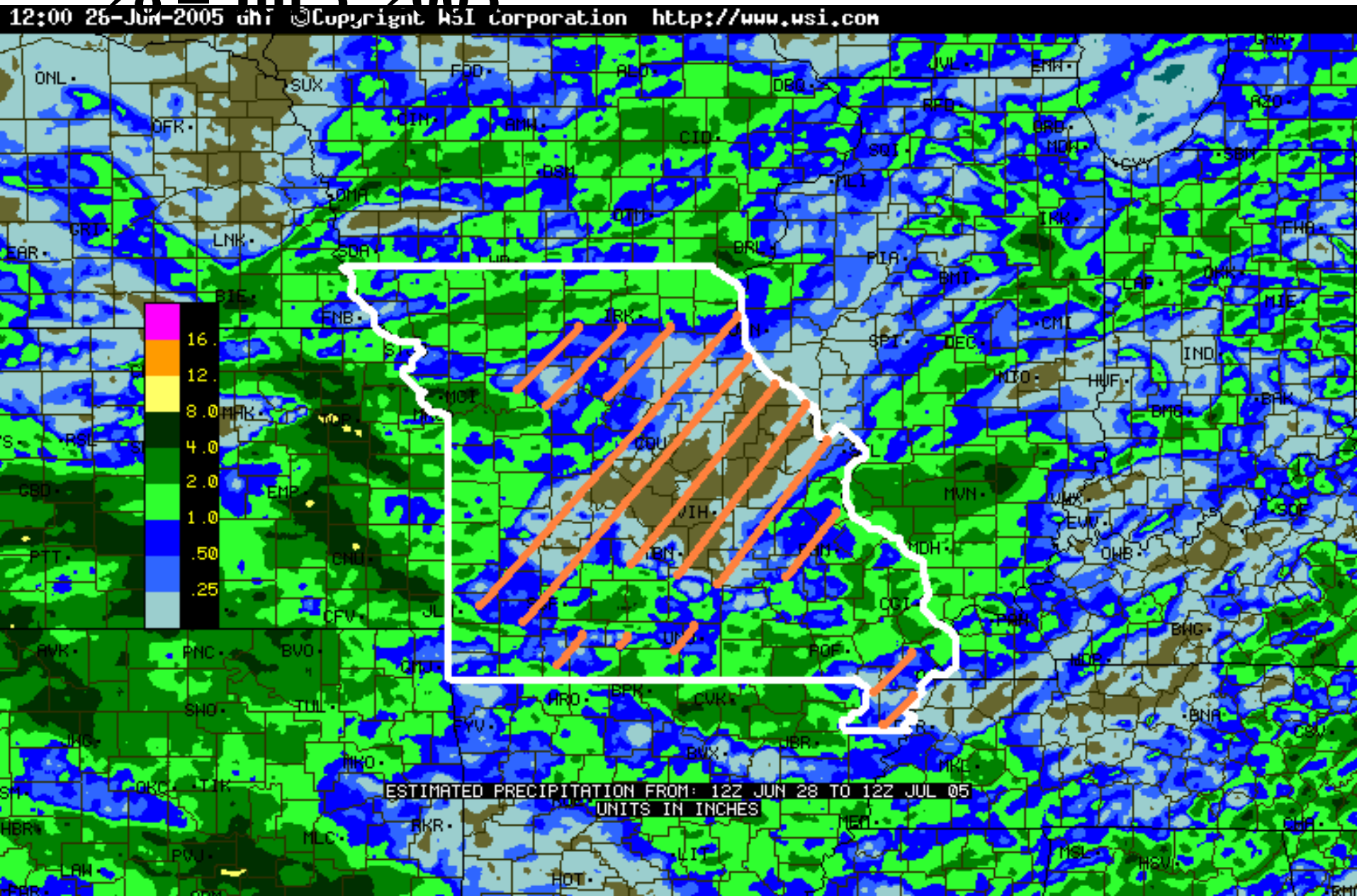
−3 −2.5 −2 −1.5 −1 −0.5 0 0.5 1 1.5 2 2.5 3

Midwestern Regional Climate Center

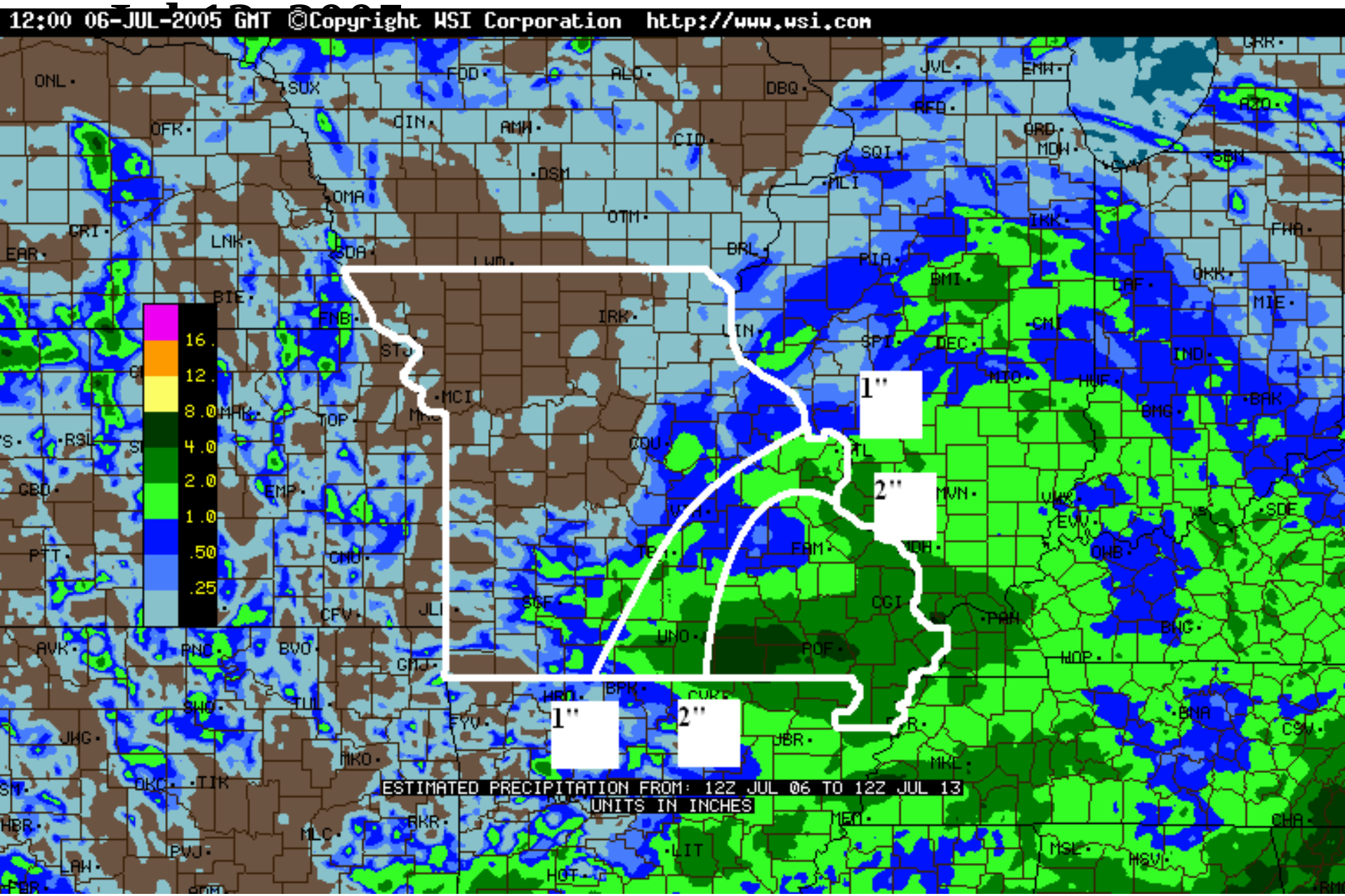
Illinois State Water Survey

Champaign, Illinois

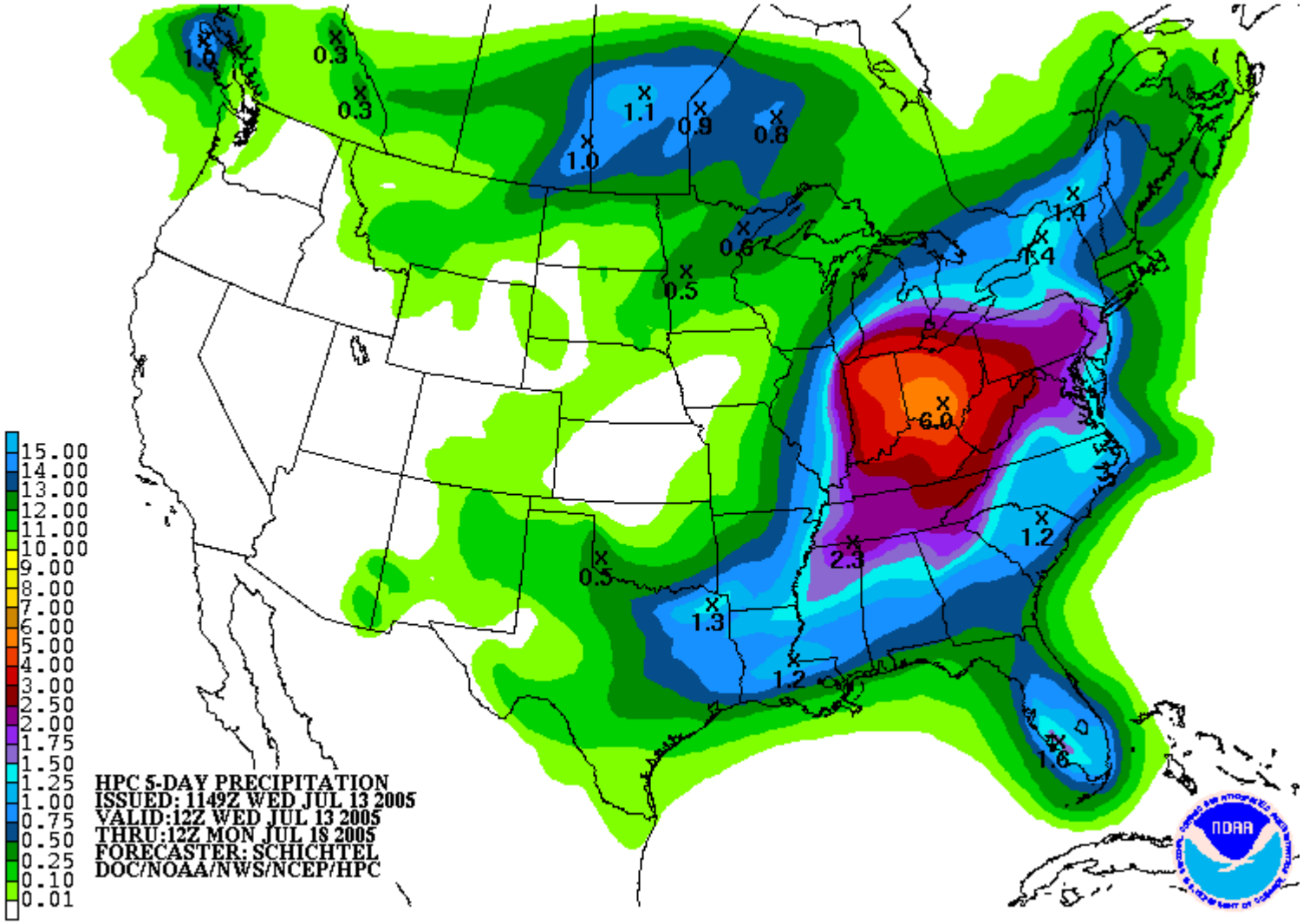
Radar Estimate of Rainfall Between Jun 28 – Jul 5, 2005



Radar Estimate of Rainfall Between Jul 6 – Jul 13, 2005



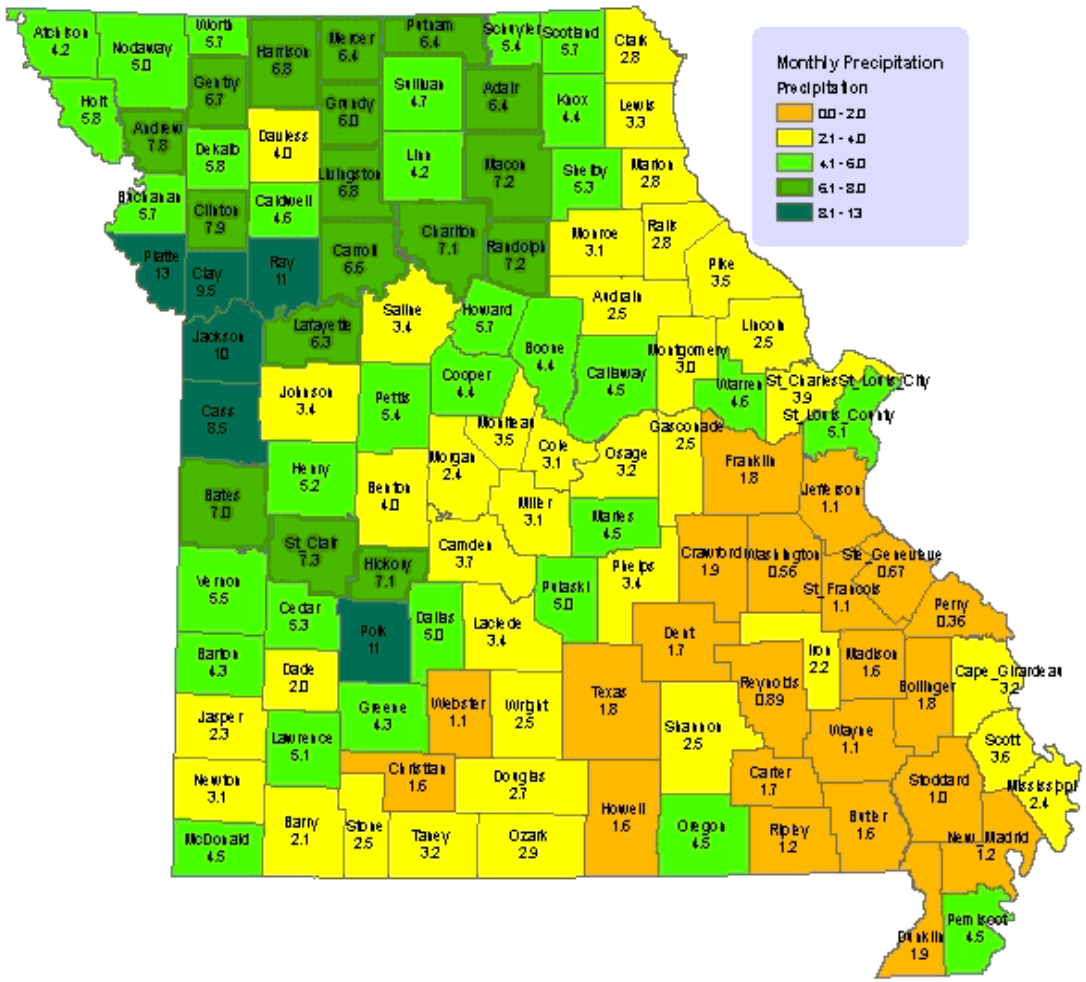
Rainfall forecast over the next 5 days (July 13-18, 2005)



Comparable Dry Periods to the current one at Columbia, MO:

Period	No. of Days	Rainfall (in.)
Jun 14 to Jul 12, 2005	29	0.08
May 24 to Jun 28, 1988	36	0.01
Jul 12 to Aug 20, 1984	40	0.01
Jun 7 to Jul 13, 1936	37	0.06

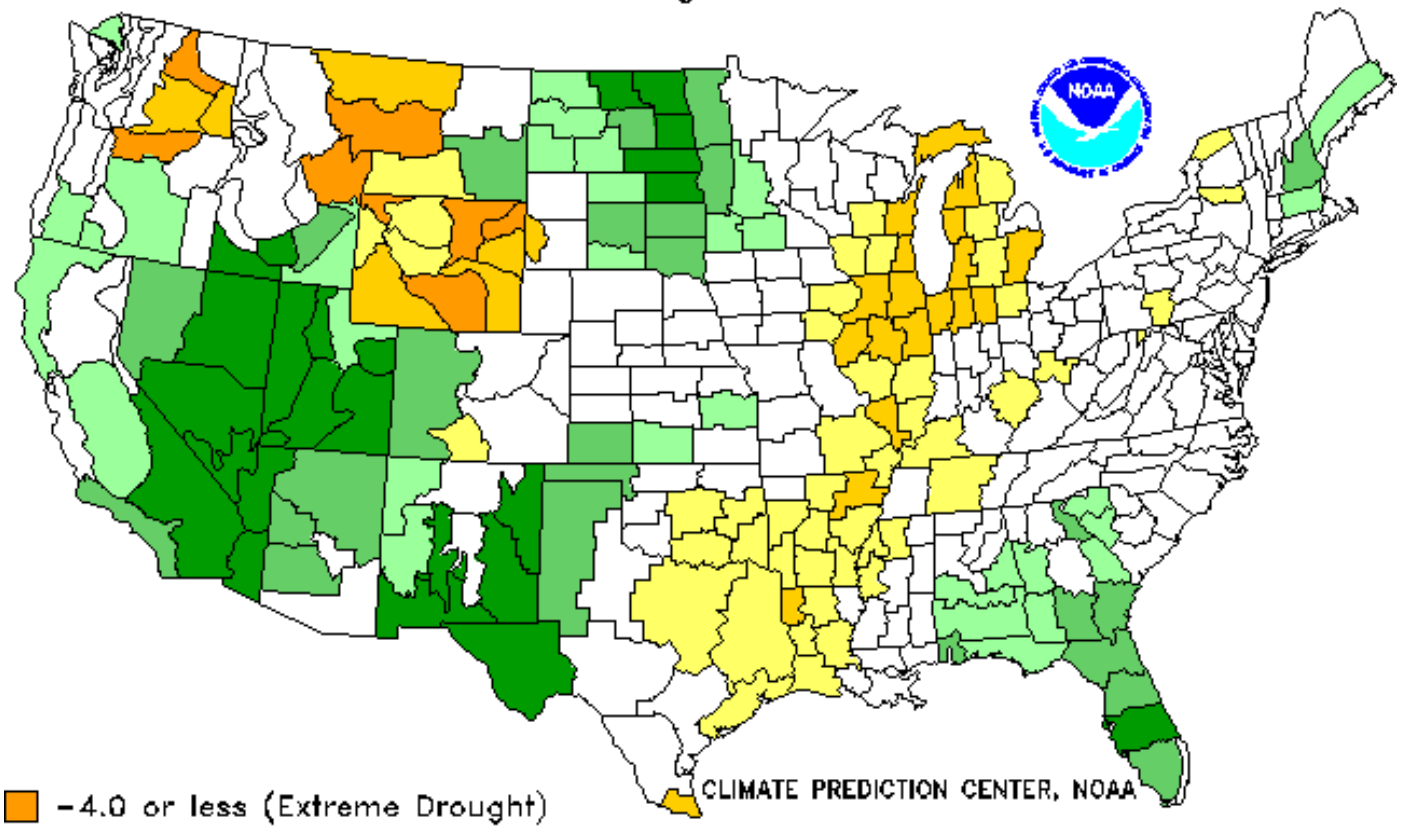
Montly Precipitation by County (June, 2005)



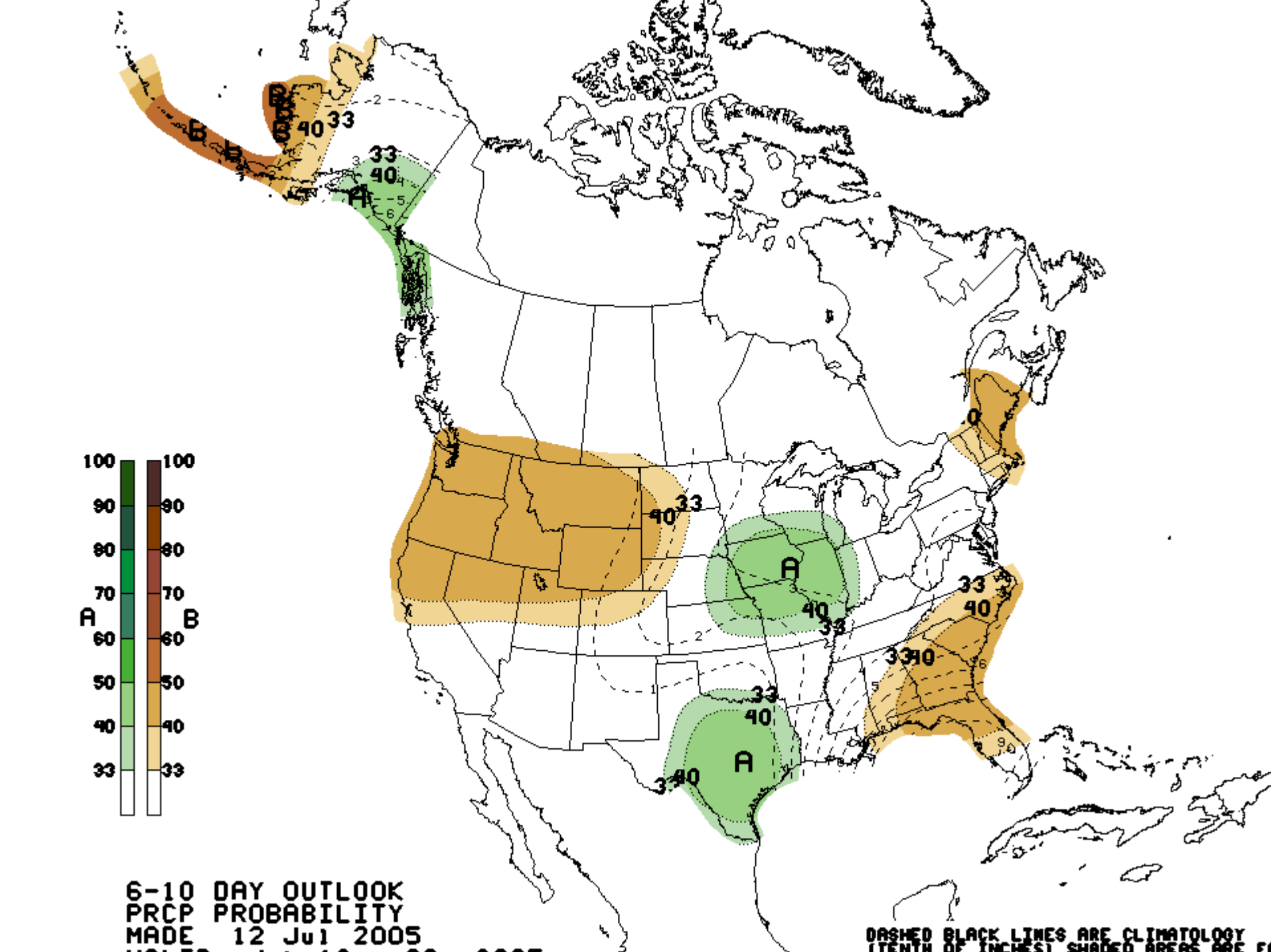
Drought Severity Index by Division

Weekly Value for Period Ending 2 JUL 2005

Long Term Palmer



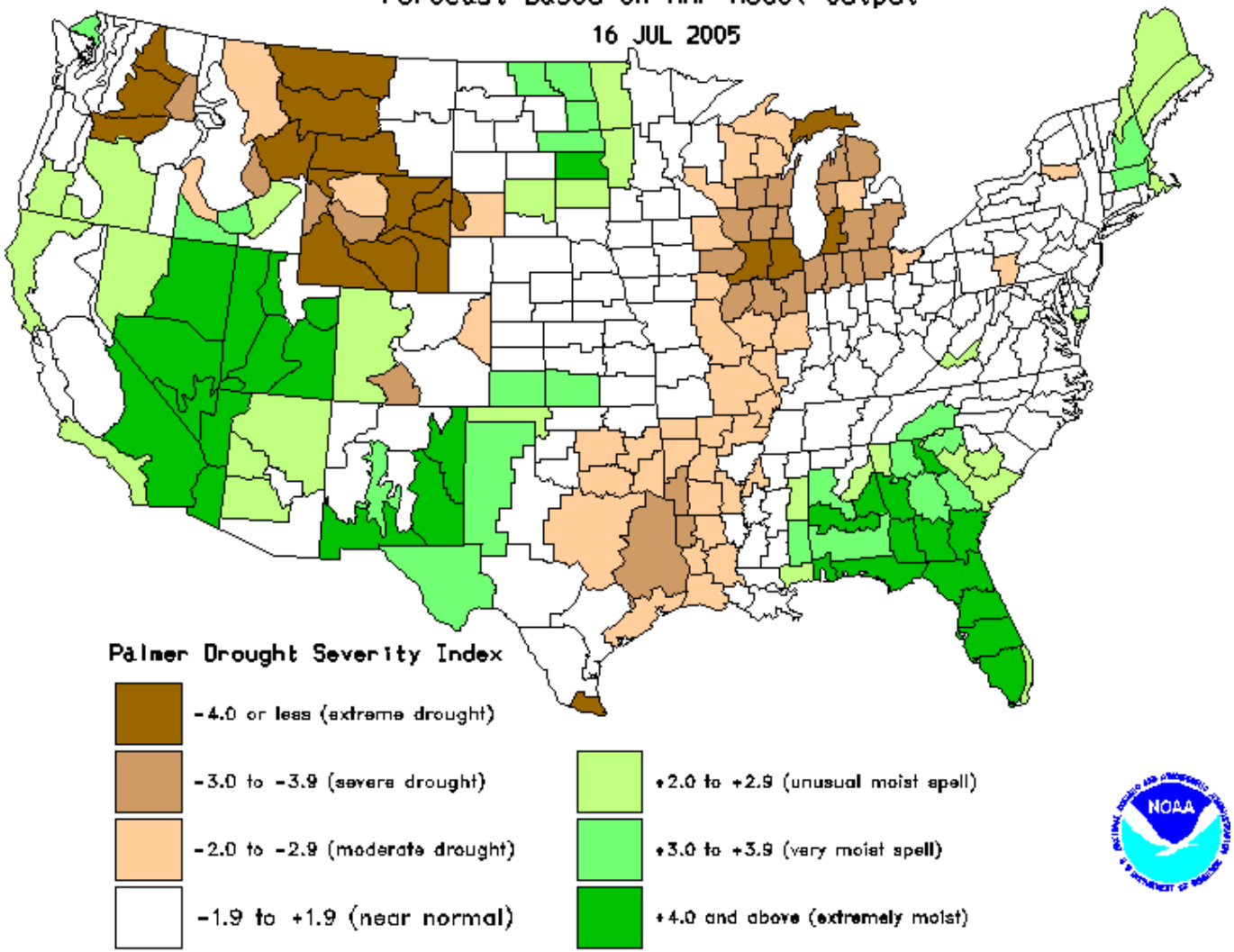
- −4.0 or less (Extreme Drought)
- −3.0 to −3.9 (Severe Drought)
- −2.0 to −2.9 (Moderate Drought)
- −1.9 to +1.9 (Near Normal)
- +2.0 to +2.9 (Unusual Moist Spell)
- +3.0 to +3.9 (Very Moist Spell)
- +4.0 and above (Extremely Moist)


100
90
80
70
A
60
50
40
33
100
90
80
70
B
60
50
40
33
6-10 DAY OUTLOOK
PRCP PROBABILITY
MADE 12 Jul 2005
DASHED BLACK LINES ARE CLIMATOLOGY

PALMER DROUGHT INDEX FORECAST BY DIVISION

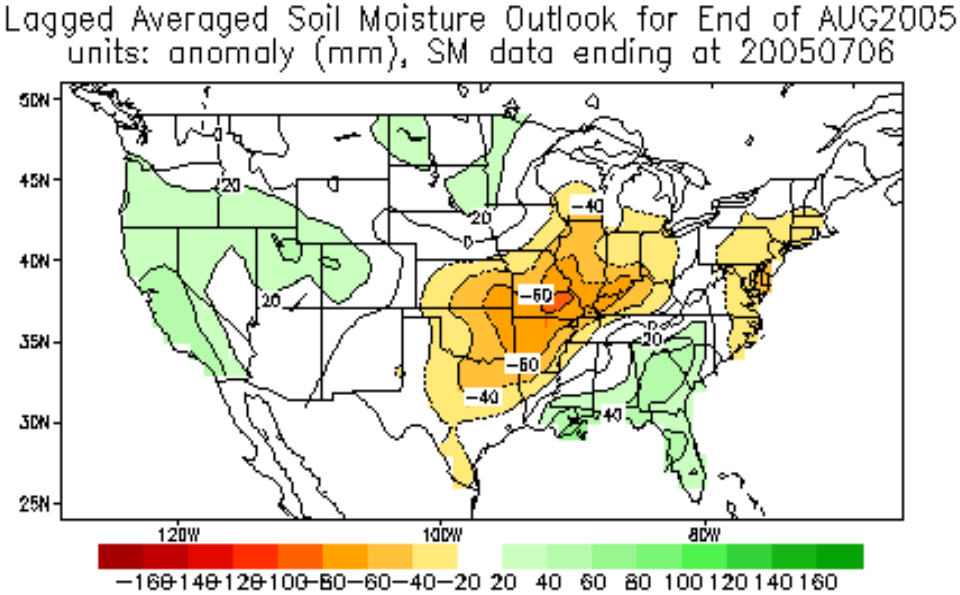
Forecast Based on MRF Model Output

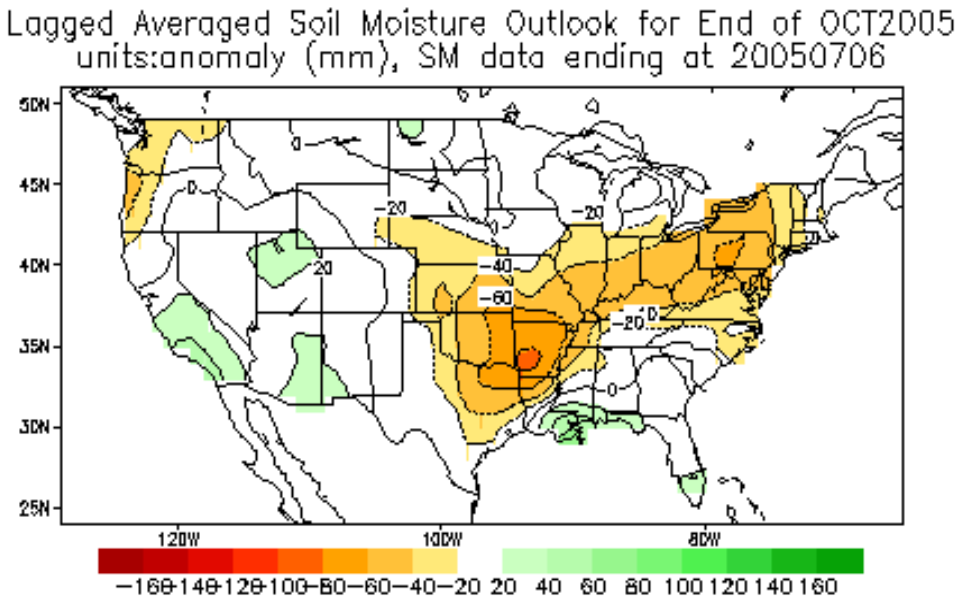
16 JUL 2005



CLIMATE PREDICTION CENTER, NOAA

Soil Moisture Outlooks by NOAA

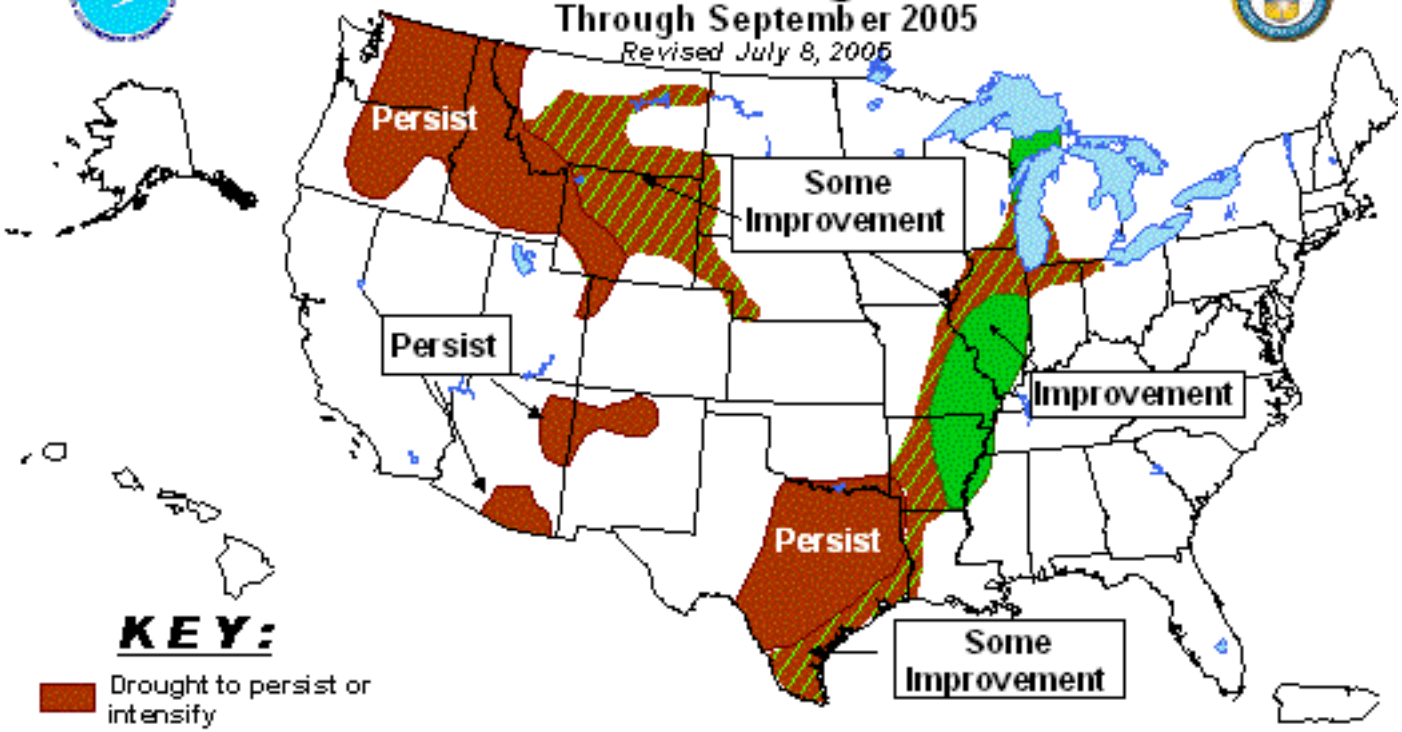




U.S. Seasonal Drought Outlook

Through September 2005

Revised July 8, 2005

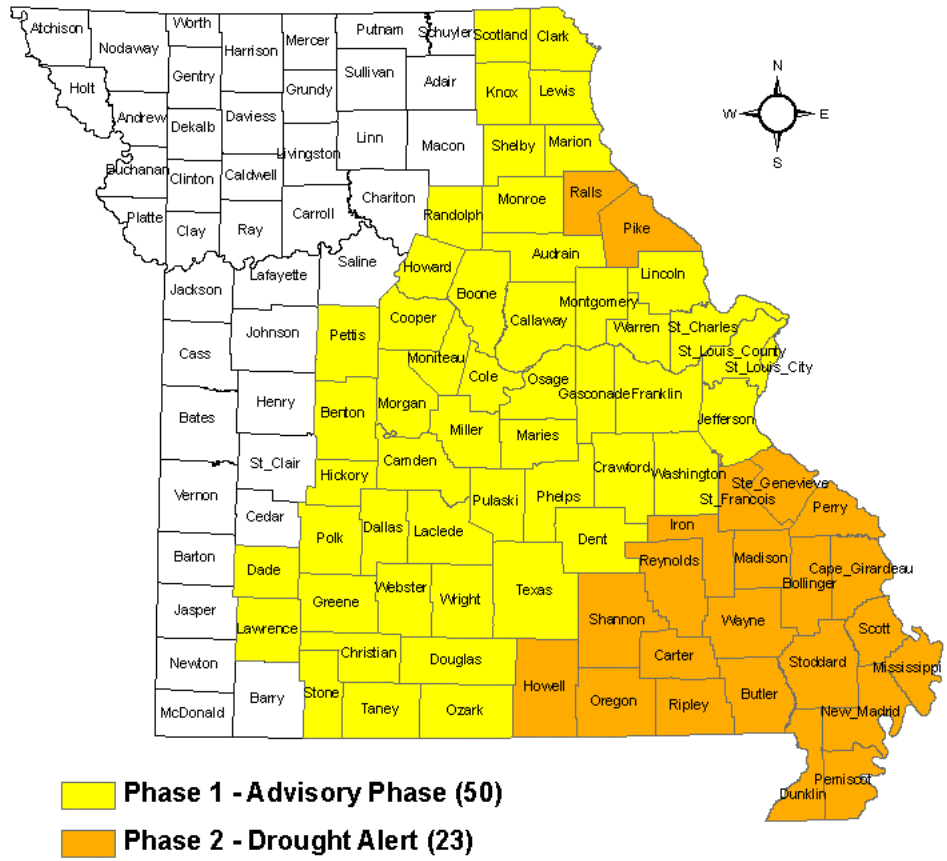


KEY:

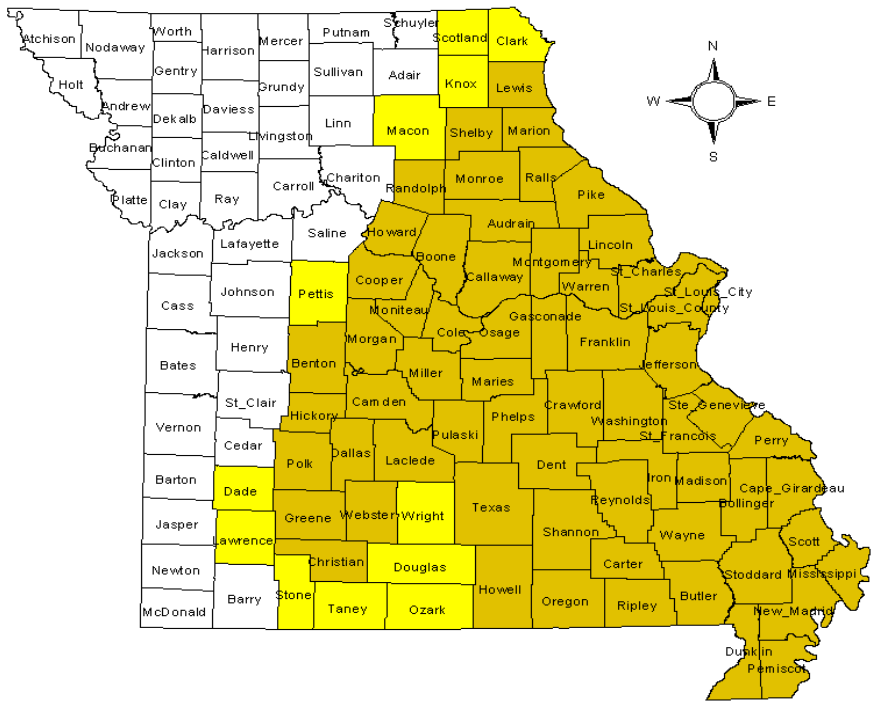
- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts general, large-scale trends based on subjectively derived probabilities guided by numerous indicators, including short- and long-range statistical and dynamical forecasts. Short-term events – such as individual storms – cannot be accurately forecast more than a few days in advance, so use caution if using this outlook for applications – such as crops – that can be affected by such events. "Ongoing" drought areas are schematically approximated from the Drought Monitor (D1 to D4). For weekly drought updates, see the latest Drought Monitor map and text. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Interim Drought Condition Status (June 30, 2005)



Recommended Drought Condition Status (July 8, 2005)



Phase 1 - Advisory Phase (12)
Phase 2 - Drought Alert (63)